GEOGRAPHIC NEWS BULLETINS

Published Weekly by

THE NATIONAL GEOGRAPHIC SOCIETY

(The National Geographic Society is a scientific and educational Society, wholly altruistic, incorporated under the Federal law as a non-commercial institution for the increase of geographic knowledge and its popular diffusion. General Headquarters, Washington, D. C.)

Contents for Week of October 12, 1936. Vol. XV. No. 14.

1. Toledo's Alcázar a Casualty in Spain's Civil Strife
2. Charcot's Death Closes a Chapter in Exploration
3. Lichfield, England's Town of Towers and Wit
4. Here Bicycles, There Bicycles, Everywhere Bicycles
5. Mountain Climbing on Wheels in Shenandoah National Park

Photograph by Willard Price

CHILDREN OF ALL COUNTRIES KNOW THAT "BICYCLE" MEANS "GO"

In Yap, where clothing is scorned as a degrading western invention, bicycles are welcomed (see Bulletin No. 4).

HOW TEACHERS MAY OBTAIN THE BULLETINS

The Geographic News Bulletins are published weekly throughout the school year (thirty issues) and will be mailed to teachers in the United States and its possessions for one year upon receipt of 25 cents (in stamps or money order); in Canada and other foreign countries, 50 cents. Entered as second-class matter, January 27, 1922, at the Post Office at Washington, D. C., under the Act of March 3, 1879. Acceptance for mailing at special rate of postage provided for in section 1103, Act of October 3, 1917, authorized February 9, 1922.

GEOGRAPHIC NEWS BULLETIN

Published Weekly by

THE NATIONAL GEOGRAPHIC SOCIETY

(Founded in 1888 for the Increase and Diffusion of Geographic Knowledge)

General Headquarters, Washington, D. C.

Toledo's Alcázar a Casualty in Spain's Civil Strife

TOLEDO'S great fortress-castle, the Alcázar, has once again felt the attack of armed forces. Spanish insurgents, barricaded in the square building whose four towers dominate the city's highest point, defended it for over two months with heroic fortitude, admired even of their besiegers.

Burned, bombarded, and rebuilt many times, the Alcázar belongs to history rather than to any one period. The first building on the site of the Alcázar may have been a fort of an ancient Iberian tribe. Later, Rome's legions and Visigothic chieftains successively made it their citadel.

Once Residence of the Famous Cid

Next used by the Moors as a fortress, it was captured in the eleventh century by Spanish forces under Alfonso VI and the Cid, Spain's hero of fact and fiction, who made it his official residence. It was enlarged in their turn by Ferdinand and Isabella, Charles V, and Philip II. Rebuilt after burning twice during the past century, most of the structure is recent.

Although only 47 miles southwest of Madrid, just over an hour's train ride, Toledo is centuries removed from the modern capital of Spain. Actually few modern improvements have been introduced since Philip II moved the capital to Madrid more than 350 years ago. Many of the narrow, twisting streets are mere slits between tall shuttered houses, hardly wide enough for two donkey carts to pass. Toledo is, in appearance and atmosphere, a distinctly oriental city. Perfect examples of Moorish art and architecture abound there.

The swift Tagus River, whose rocky gorge forms a natural moat on three sides of Toledo, is spanned at the eastern edge of the city by the Alcántara, a bridge of Moorish origin.

Cervantes Lived in Toledo Inn

The hub of activity for Toledo's 20,000 inhabitants is the Plaza de Zocodover, a three-sided "square" tucked away in the northeast corner of the city. It is the scene of a weekly market which is essentially the same today as it was in the days when Spain's beloved Cervantes lived and wrote in a small inn scarcely a stone's throw away. A bust of the creator of Don Quixote, seedy knight of fiction who dealt the death-blow to Spanish feudalism, marks the old inn which is one of the city's chief points of interest.

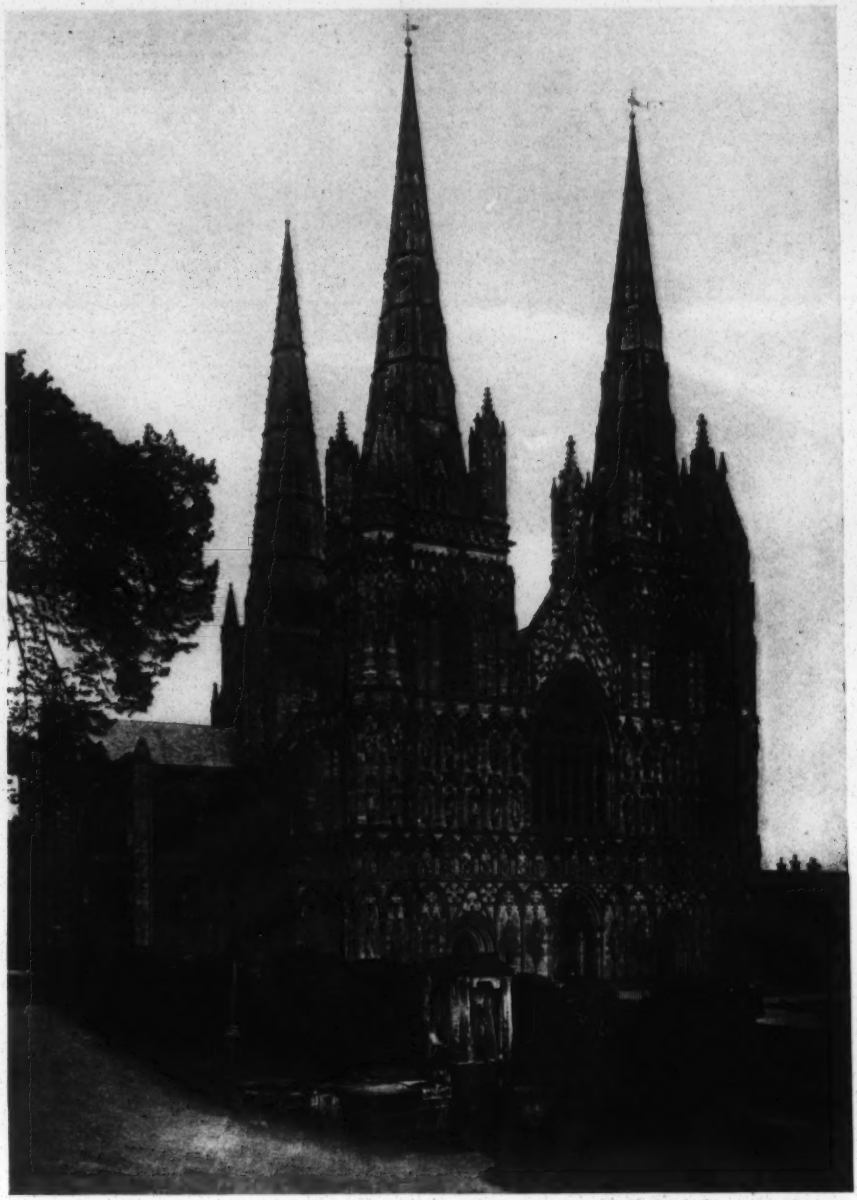
Equally esteemed is a contemporary of Cervantes—Domenico Theotocopouli, better known as El Greco, one of Spain's most famous painters, whose home for many years has been restored (see illustration, next page).

In the heart of the city rises a French-Gothic cathedral, unrivalled in Spain for its collection of artistic masterpieces. Hemmed in on three sides by houses, it is impossible to get an adequate idea of its beauty and size. Begun by medieval craftsmen in 1227, the cathedral took 226 years to build.

Among Toledo's chief points of interest is the Church of San Juan de los Reyes, started in 1476 under Ferdinand and Isabella's direction, and intended by them to be their tomb. Just southeast of the church lies the old Jewish quarter. Toledo was for many centuries one of the strongholds of Jewish activity and a center of Hebrew culture.

After its capture by Alfonso VI's forces in 1085, Toledo was the capital of

UMI



© National Geographic Society

THE THREE "LADIES OF THE VALE"

Because of their airy and slender grace, the three spires of Lichfield Cathedral are called the "Ladies of the Vale"—the only trio of spires on any of England's cathedrals. The central tower, which is the highest of the three, had to be restored after the Cathedral's military career. For the church, surrounded by a wall and a moat, was the fortress of Lichfield during England's Civil War, besieged and captured three times. Besiegers defaced tower and front with artillery fire, and the besieged burned much of the interior for fuel after removing the lead roof to make bullets. Here, in more peaceful days, Dr. Samuel Johnson was brought on his father's shoulders at the age of three to listen spellbound to a famous preacher (see Bulletin No. 3).

GEOGRAPHIC NEWS BULLETIN

Published Weekly by

THE NATIONAL GEOGRAPHIC SOCIETY

(Founded in 1888 for the Increase and Diffusion of Geographic Knowledge)

General Headquarters, Washington, D. C.

Charcot's Death Closes a Chapter in Exploration

STORIES terminate usually with such inscriptions as "The End." But inhabitants of Iceland recognized the end of a chapter when they read, on a sodden lifebelt washed ashore during one of last month's storms, the words *Pourquoi Pas?* —"Why Not?"

One mast projecting above the thundering surf, floating wreckage, and a sole survivor spoke an epilogue for the dramatic life of Captain Jean-Baptiste Charcot. Physician, scientist, sailor, explorer, in his three-masted barque the *Pourquoi Pas?*, he had made history for France and changed geography at both ends of the world.

Name Perpetuated in Land He Discovered

His name is internationally known to students of geography from Charcot Island, his discovery in the Antarctic.

The end of his career is also the end of an era in exploration. Charcot and the *Pourquoi Pas?* began their voyagings in a brave day when small vessels, built for ice-resistance and barely big enough to store necessities, were the sole means of penetrating polar waters and mapping icebound coastlines, with tremendous expenditure of heroic endurance for each small collection of fallible data. Increasing use of airplanes and aerial photography for mapping is closing the chapter in which Charcot wrote some memorable paragraphs.

He was a "bi-Polar" explorer, sailing into the latitudes of the seventies on gales eddying about the North and the South Poles. His summer trip across the Arctic Circle was for years practically an annual event.

The scene of his doom was in an area better known to Charcot, probably, than to any man alive. The coasts of Iceland and Greenland on the frozen Greenland Sea and the Denmark Strait, highroad of icebergs, were merely his summer resorts. Here are no protecting islands, as there are on Greenland's west coast. Gales, ice, and frigid currents sweep down unchecked from the North Pole.

His Answer to the Unknown's Challenge: Why Not?

Sometimes, behind barriers of ice too broad to be seen across, these coasts are frozen in from ten to twelve months of the year. In proportion to their distance north, they may be reached by boat only one year out of four, one out of twelve, or more. When Charcot and his companions reached D'Aunay Bay, they were the first Frenchmen to visit there for a hundred years.

His little ship carried on its bow his gallant answer to the perpetual challenge of uncharted frigid frontiers: *Pourquoi Pas?* It was especially constructed in 1908 for icy seas, its sturdy oak timbers reinforced with armor plates and galvanized sheeting, and rounded to ride upon ice cakes until its weight broke them.

It was toward the South Pole, not then discovered, that Charcot made his first two expeditions.

Land, then, was a particularly thrilling sight when, on January 11, 1910, Charcot turned his field-glasses upon "two high mountainous masses, from which emerge the black rock, and between them a smaller mass, springing from a large cap of ice." At the suggestion of an American geographer, he agreed to have it called Charcot Land, to commemorate not himself but his father, distinguished French neurologist. It was not until twenty years later that the flight of Sir Hubert Wilkins in December, 1929, outlined Charcot's discovery and revealed that it is an island and not part of the mainland of Antarctica.

UMI

Christian Spain for almost five centuries; all that now remains as an outward symbol of its days of glory is its importance as a center of religious power. For this reason it has been called the "Rome of Spain."

Business of Blades Still Thrives

A modern weapon factory located just outside the city carries on the tradition of many small shops which once produced the famous "Toledo blades" that helped Spain to carve out a new empire across the seas. Some particular virtue of Tagus water and sand, with which the blades were tempered and polished, is said to have given weapons made here their preeminent quality. Toledo is also noted for the fine damascened ornamentation on modern reproductions of old swords and other steel work.

Note: Toledo and other war-torn areas in Spain are more fully described in the following: "Turbulent Spain," *National Geographic Magazine*, October, 1936; "Palette from Spain," March, 1936; "Montserrat, Spain's Mountain Shrine," January, 1933; "Madrid Out-of-doors," August, 1931; "Pursuing Spanish Bypaths Northwest of Madrid," January, 1931; "Seville, More Spanish Than Spain," "On the Bypaths of Spain," and "Barcelona, Pride of the Catalans," March, 1929; "Balearics, Island Sisters of the Mediterranean," August, 1928; and "Adventurous Sons of Cádiz," also "From Granada to Gibraltar," August, 1924.

See also in the GEOGRAPHIC NEWS BULLETINS: "Spain—Country of Contrasts and Contradictions," week of October 5, 1936; "Sitges—Playground of Spain's Catalonia," week of May 4, 1936; "Catalonia, the Workshop of Spain," week of October 29, 1934; "Granada Keeps Washington Irving's Memory Green," week of January 29, 1934; and "Toledo, Spain, Names Street for Its American Namesake," week of December 4, 1933.

Photograph by Angel Rubio

BIRTHPLACE OF MASTERPIECES

Here, during the decadence of Toledo's importance, the painter El Greco gave the city many leases on posterity in the shape of paintings now coveted the world over. Their religious subjects indicate that they were painted originally for splendid churches and monasteries mainly around Toledo. This house, Casa del Greco, now almost 400 years old, saw triumph come to "the Greek" with Italian training and Spanish patrons, and sheltered him in his subsequent poverty.

GEOGRAPHIC NEWS BULLETIN

Published Weekly by

THE NATIONAL GEOGRAPHIC SOCIETY

(Founded in 1888 for the Increase and Diffusion of Geographic Knowledge)

General Headquarters, Washington, D. C.

Lichfield, England's Town of Towers and Wit

"WE HAD a comfortable supper, and got into high spirits." Thus is recorded the pompous merriment of Dr. Samuel Johnson, England's pioneer lexicographer de luxe, by his satellite Boswell, after an evening at the Three Crowns Inn at Lichfield in 1776.

Change has swept over parts of England since then, and especially over the colonies which were in such a rebellious mood at that time. Yet Lichfield, peaceful Staffordshire town in the Midlands, is virtually unchanged.

The same words could describe an evening there last month when a club of Dr. Johnson's admirers convened for their annual celebration in the town of his birth on the date of his birth, September 18.

Haunts of Dr. Johnson Are Relatively Unchanged

There are some gas stations and parking lots, mainly for motorists who dash along to Birmingham (which Dr. Johnson considered within walking distance) or over the 116 miles to London. The business expansion of two centuries has not yet brought the town's chief industry, brewing, to a point where the largest brewery can rival the size of the Cathedral, one of the smallest in England.

Lichfield remains a quiet town of about eight thousand, still more renowned for "company than comfort," still proud of its distinguished citizenry of the past.

The Johnson Club can banquet in the Guildhall on Bore Street, which, in the best British tradition, changes its name at practically every street corner.

More often, however, the Club prefers to gather in that same Three Crowns Inn. Here Dr. Johnson chose to spend his Lichfield visits, despite invitations from friends, because he liked the proprietor; and here Boswell liked to stay because he liked the ale. Even 160 years ago it was praised as not "one of the great inns, but a good old-fashioned one," with a plain flat front and a parlor generously warmed with fireplaces. It gave Scottish Boswell a malicious thrill when the inn served oat ale and oat cakes for breakfast to Dr. Johnson, in his native town—the man whose dictionary defined oats as food fit only for horses, except in Scotland.

Still a "City of Philosophers"

Even more interesting is the Johnson birthplace next door, now a museum, on the corner of Market Street in the town's public square. On the ground floor is the shop with its small-paned windows, where Samuel's father, melancholy Michael, sold books and stationery. In a room above, Johnson was born, and his baptism is registered in St. Mary's Church just across the street. In Dam Street a block away a tablet marks the site of the dame school which near-sighted little Samuel attended. In the opposite direction is the old Grammar School where he learned his Latin, along with mischievous lads who became the distinguished journalist Joseph Addison, the famous sprightly actor Garrick, and scholarly Ashmole, who gave an archaeological museum to Oxford.

Hardly a mile south of the town stands dignified Edial Hall, to which Johnson brought his elderly wife for a honeymoon of housekeeping for a private school. The fields about have changed little since Johnson spent his Sunday mornings reading there, when his poor eyesight made him clumsy at finding a seat in crowded churches. "Johnson's Willow" is believed to be a grandchild of the very tree which he especially admired and came to see on every visit to Lichfield.

UMI

At the other end of the world, to his favorite Arctic areas, Charcot returned again and again, comparing conditions of ice, weather, depth of channel, strength of current, flora and fauna. Each little uninhabited fjord, whenever possible, was charted. Each little settlement of Eskimos was entertained on board the *Pourquoi Pas?* so that their customs and physical traits could be studied. His independent research in the region is credited with the invitation to France to establish an observation station at Scoresby Sound (see illustration, below).

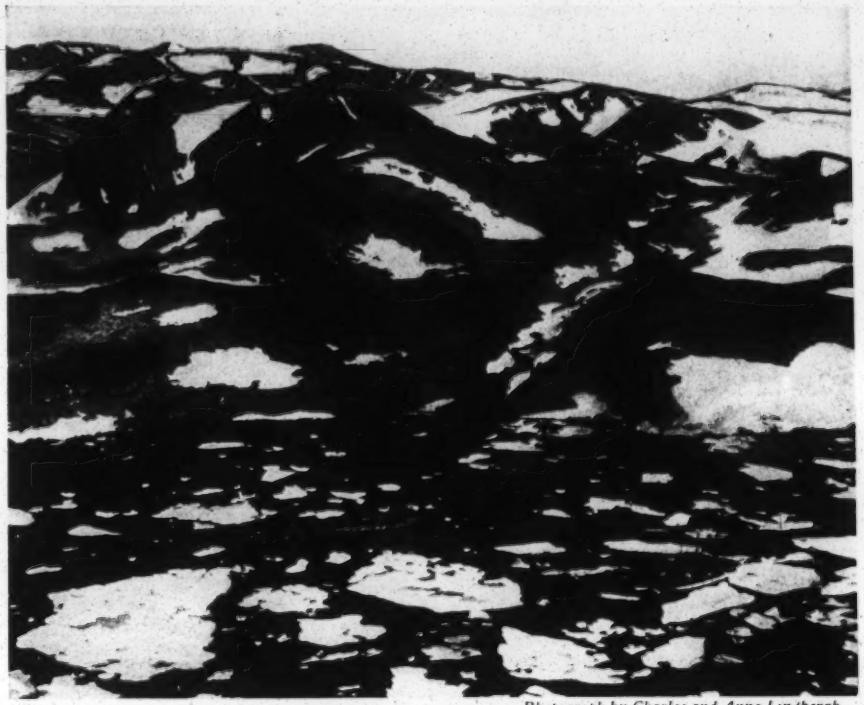
In recognition of his contributions to geographic knowledge, he was made a life member of the National Geographic Society.

He was an acknowledged authority on traveling through the polar pack ice, where a ship must dodge cathedral-size icebergs shrouded in icy fogs, through which the midnight sun appears only as a thin pewter disc.

Note: The Arctic and Antarctic regions, and Greenland, which Charcot explored unceasingly, are described in the following: "My Flight Across Antarctica," *National Geographic Magazine*, July, 1936; "Exploring the Ice Age in Antarctica," October, 1935; "Flying Around the North Atlantic," September, 1934; "Mapping the Antarctic from the Air," October, 1932; "Conquest of Antarctica by Air," August, 1930; "Navigating the *Norge* (airship) from Rome to the North Pole and Beyond," August, 1927; "First Flight to the North Pole," September, 1926; "MacMillan Arctic Expedition Returns," and "Flying over the Arctic," November, 1925.

Maps of the Arctic Regions and Antarctic Regions can be had for 50 cents postpaid (paper) and 75 cents postpaid (linen) in the United States and its possessions. On the Antarctic Regions Map, Charcot's voyage of discovery is charted.

Bulletin No. 2, October 12, 1936.



Photograph by Charles and Anne Lindbergh

A BOOM IN ARCTIC REAL ESTATE

Most "booms" in the Arctic are distant thunder of icebergs, breaking from their parent glaciers on such agate-colored rocky mountainsides as these, and plunging into the sea. But a mild real estate boom made history in the ice-jammed fjord of Scoresby Sound, on Greenland's bleak east coast, when Danish officials induced 90 Eskimos to make their homes there. Then a French scientific expedition was stationed there, and was visited every summer by Dr. Charcot in the three-masted *Pourquoi Pas?* accompanied by the larger icebreaker *Pollux*. Bergs and mountains dwarf the French boats and the houses to the proportions of toys.

GEOGRAPHIC NEWS BULLETIN

Published Weekly by

THE NATIONAL GEOGRAPHIC SOCIETY

(Founded in 1888 for the Increase and Diffusion of Geographic Knowledge)

General Headquarters, Washington, D. C.

Here Bicycles, There Bicycles, Everywhere Bicycles

THE bicycle is back again. Census Bureau reports on the vital statistics of wheels show that 640,000 new ones were produced in the United States in 1935, the biggest crop in thirty years.

A Fad Here, a Necessity Elsewhere

Massachusetts police chiefs are concocting traffic regulations for cyclists. Large cities have built special cinder-surfaced paths for them through shady parks. Department stores offer pedaling instruction on indoor rinks or stationary wheels.

Weekly "bike trains" carry the two-wheeled sportsmen, their cycles stabled in baggage cars, off to quiet country roads for a day's exercise beyond the reach of metropolitan street jams.

This latest craze in America has been seized upon as a pleasant means of obtaining the city-dweller's luxuries, fresh air and exercise. In many foreign countries, however, where the bicycle has long been elected the leader among vehicles, it won its popularity contest on the durable platform of usefulness.

In Bermuda, for instance, where automobiles are banned, bicycles are virtually a household necessity for youth and age. The flat brick highways of the Netherlands are too good as cycling roads to waste, and in many parts of that land there are separate paths for bicycles as well. Shady lanes of the English countryside, too narrow for autos, are ideal for touring on two wheels. In Nicaragua, larger imported vehicles may necessitate considerable expense, but bicycles in droves are imported from England; swarms of them dispute the streets of Managua with ox-carts and automobiles.

Police on bicycles patrol the canal paths of southern France. "The ploughman homeward plods his weary way" no longer; he pedals. At sunrise peasant women briskly cycle to market, their geese for *foie gras* sitting in rows on handlebar trays.

Some Bicycle Capitals of the World

The bicycle population of Kobenhavn, Denmark, is a third as large as the human population. Special police direct the two-wheeled traffic.

The Netherlands' levelness creates a pedalist's paradise. There appear to be two schools of thought on the transportation problem: that which advocates a whole bicycle for every member of the family, and that approving a whole family or a major fraction on every bicycle. A common version of this family vehicle carries a seat on front or rear for youngsters. Here bicycles appear to react to tides. In the morning, they flow steadily toward business centers; in the evening, steadily away. At all times they outnumber automobiles.

The farmer in the reclaimed portion of the Zuider Zee can pedal while wearing his wooden shoes.

Climate does not affect the Netherlander's affinity for the bicycle. He is addicted to it even in Bali, Netherland possession in the Far East. There the white sand of the tropical island's fabled beach is not without its share of tracks from the narrow rubber tire. Another remote island which the bicycle has reached is Yap (see illustration, front page).

In Germany bicycle tours are popular. Plump frauleins tear along at 12 miles an hour, some holding cotton umbrellas over their heads. Industrial centers are also cycling centers.

Bicycles are widely used not only in England, but also in Ireland and Scotland. Cycles in Belfast are more numerous than motors. The Scotsman, however, puts his bike to a very practical use, such as delivering the morning milk.

Bicycle tours are widely advertised in Sweden, with such conveniences as exclusive paths and the obliging midnight sun to light a long journey without headlights.

The passion for man-power transportation is not limited to Europe. In Tripoli, for example, northern Africans ride to mosque on bicycles and stack them outside on the ground.

The Far Eastern concentration point for bicycles is Japan, where there are almost six million for sixty million people, twenty times the proportion in the United States (see illustration, next page). Although the jinrikisha is popularly considered the epitome of Oriental transportation, it is far outnumbered in Tokyo by bicycles.

Such widespread use of cycles is comparatively recent, for their earlier popularity was spasmodic.

The first craze was for the walk-bicycle, or pedestrian curricle, developed in France and popularized in England about 1820 by the British coachmaker Denis Johnson. It was simply an invention for walking on wheels, a wooden rail mounted on two grooved wooden wheels,

UMI

Dr. Johnson, whose statue, with its lamp-posts in the corners of its iron fence, is given the place of honor in Lichfield's public square, is but one of the town's famous persons. The figure of Boswell nearby is his companion in statuary as in life. Lichfield encouraged wit as well as sweetness among women, producing Ann Seward, "the Swan of Lichfield," and Lady Mary Wortley Montagu, intellectual letter writer. Erasmus Darwin, grandfather of the illustrious Charles, lived here for a quarter of a century. Monuments commemorate Major Hodson, military hero who fell in the Indian Mutiny, and Captain Smith, maritime hero, who went down on the *Titanic*.

Sir Walter Scott selected Lichfield Cathedral as burial place for his fictitious Lord Marmion, in whose tomb a lowly woodsman was buried by mistake.

The Cathedral of blush-red limestone, growing green-gray with age and moss, surpasses Dr. Johnson as a tourist attraction, in spite of its small size. With its three graceful towers, it is called the "Lady of Cathedrals" because of its beautiful proportions (see illustration, inside cover).

One explanation of Lichfield's name is that it derives from "field of corpses," because of a tradition that a thousand Christians met martyrdom nearby around 300 A.D. The name is perpetuated in Litchfield, Connecticut, which in 1720 set a style followed later by Litchfield, Illinois, and Litchfield, Minnesota.

In addition to the town's brewing, there are restrained efforts at stone-carving, metal-working, and market gardening in the neighborhood. But Lichfield still recalls Dr. Johnson's explanation, made when Boswell accused the town of being an idle set of people: "Sir, we are a city of philosophers; we work with our heads, and make the boobies of Birmingham work for us with their hands."

Note: England, Dr. Johnson's native country, is described in the following articles: "Within the Halls of Cambridge," *National Geographic Magazine*, September, 1936; "How Warwick Was Photographed in Color," July, 1936; "Informal Salute to the English Lakes," April, 1936; "Great Britain on Parade," August, 1935; "The Penn Country in Sussex," July, 1935; "Summering in an English Cottage," April, 1935; "Vagabonding in England," March, 1934; "Beauties of the Severn Valley," April, 1933; "Between the Heather and the North Sea," February, 1933; "Some Forgotten Corners of London," February, 1932; "Visits to the Old Inns of England," March, 1931; "Oxford, Mother of Anglo-Saxon Learning," November, 1929.

For articles about other great men of English literature see in the GEOGRAPHIC NEWS BULLETINS: "Stratford-on-Avon Thrives on Birthplace Business," week of April 20, 1936; "The Centenary Encore for Mr. Pickwick," week of April 6, 1936; "Kipling, World Geographer as Well as Romancer," week of February 17, 1936; "Manchester, Middleman of the English Midlands (De Quincey)," week of January 27, 1936; "England Saves Wordsworth's Daffodil Fields," week of April 8, 1935.

Bulletin No. 3, October 12, 1936.

A Gift to Education—How Teachers May Cooperate

THE GEOGRAPHIC NEWS BULLETINS are a gift of the National Geographic Society to education. This is the second issue of 30 numbers, each containing five illustrated Bulletins, to be mailed weekly during the current school year.

Because these Bulletins represent a substantial gift to schools from The Society's educational fund, the expense of advertising or circulation promotion cannot be undertaken as would be the case with a commercial publication. The Society must rely upon supervisory officials and teachers to call them to the attention of their colleagues who might use them effectively. This should be done promptly so that applicants may be put upon the mailing list to receive the early issues.

The following order form may be used:

School Service Department,
National Geographic Society,
Washington, D. C.

Kindly send ..... copies of the Geographic News Bulletins weekly for one school year for classroom use, to

Name .....

Address for sending Bulletins .....

City ..... State .....

I am a teacher in ..... school ..... grade

I enclose, for each subscription, 25 cents (in United States or its possessions; in Canada and other foreign countries, 50 cents): Total amount .....

GEOGRAPHIC NEWS BULLETIN

Published Weekly by

THE NATIONAL GEOGRAPHIC SOCIETY

(Founded in 1888 for the Increase and Diffusion of Geographic Knowledge)

General Headquarters, Washington, D. C.

Mountain Climbing on Wheels in Shenandoah National Park

OPENING the northern segment of Skyline Drive brings the mountains as close as your automobile door, if you are one of the 13 million Americans living within a few hours' drive of Shenandoah National Park.

Sixty-five miles of scenic roadway along the crest of the Blue Ridge Mountains of Virginia are now included in this, the nation's newest, national park.

Mountaineering, if you should prefer it thus, becomes a spectator sport. Over 30,000 in a day may watch the fall fireworks of the trees from a ringside seat along the highway.

Faint Blue Haze Inspires Mountains' Name

For those who prefer nature undiluted, there are miles of trails for hikers from height to height, with numerous creeks between to cross on fallen logs.

Two main Virginia highways connect with Skyline Drive. Picnic grounds and parking spaces are found overlooking colorful valley views, their rustic fittings made of wood and stone found on the spot.

The Shenandoah National Park's 176,429 acres embrace scenery which is the happy medium for mountains. Higher, they would be less accessible; lower, they would be less picturesque. Sidney Lanier admired the region, where "the Appalachian ruggednesses calm themselves into pleasant hills before dying quite away into the seaboard levels." The average altitude, somewhat higher than 3,000 feet, is just sufficient to catch the shimmering blue haze which named the Blue Ridge.

A color equally as characteristic is the gray-green of many a wind-bent "lonesome pine" near the ridge crests, or the deep green gloss of mountain laurel. Gray skeletons of chestnut trees, bleaching casualties of the blight years ago, stand against the green background.

Skyline Drive follows the Blue Ridge crest, with gently sloping foothills on the east and a sharp drop on the west into the field-checkered and town-dotted Shenandoah Valley. Beyond the blue band of Massanutten Ridge, bisecting the valley, rise faint blue scallops of the Allegheny Mountains.

Mountain Spurs Form Picturesque Pockets

From the Blue Ridge branch numerous mountain spurs to form shadowy pockets, or "coves." In winter they are drifted deep with snow that lingers for weeks. In summer their shady thickets are sprinkled with little waterfalls and rushing creeks.

Tucked away here have lived generations of mountaineers, isolated because they asked nothing of life except their mountains, and hence needed to seek nothing beyond. That they lived long and lustily, despite the rarity of reluctant doctors' visits, is proved by such legendary reminiscences as percolate through the constant terbaccychawin'. There was the bearded bare-footed patriarch who ruled Free State Hollow with his own gun, recognizing no outside authority, not even revenuers. There were unkillable mountain dames, like the one who could spin yarns about the seventeenth century for her great-great-grandchildren.

Four hundred mountain families were moved from their log cabins and corn-and-taters patches to less primitive homes, to make way for the park.

The high, wide expanse of Big Meadows, famous as site for experiments with

UMI

propelled "scooter" fashion. Even Johnson's riding school could not induce current sportsmen to suffer for long the general ridicule toward riders of these Dandy-Horses.

Fifty years, however, brought radical changes. A monument is erected in Bar-le-Duc, near Verdun, France, to the French locksmith Michaux who suggested pedals for wheels. One of his dissatisfied workmen ran away and patented the idea in the United States. In Boston carriage manufacturers began to turn them out, lumbering contrivances of wood. These "velocipedes" had wooden pedals shaped like large spools. A cord was pulled to put on the brake, merely pressing a wooden "spoon" against the wheel to slow it.

A sewing machine company produced most of these early models in England.

Translating these structures into metal was another revolutionary step. Successively came wire wheels, then metal wheels with solid rubber tires, then tubular steel bicycles. The front wheel was enlarged to a diameter of five feet, to cover more distance with less pedaling, while the rear wheel tagged along like a postscript, a foot high.

By 1870 this "highwheeler," or "spider wheel," was having its day. Six-day bicycle races started. Mounting stools were supplied at the race track for ascending the giant cycle, until builders began to construct small steps on the rear of the frame.

Frequent falls from this speedy model hastened its discard and cleared the way for the "safety" bicycle, with wheels of the same size. Pneumatic tires, invented by an Irish veterinarian for the comfort of his little son, and ball bearings made for the comfort of the cyclist. The craze was on again, ushering in the Nineties, whose cycling days are celebrated in song. By 1896 it was estimated that the United States had four million "bike" riders.

It was then that the feminine ambition was to "look sweet upon the seat of a bicycle built for two." And women's rights to athletics were then asserted. Previously, the "ladies' delight" had been a contraption with side-saddle seat and handles, instead of pedals, turning the front wheel. Tricycles, adult size, were also considered suitable as well as safe for women and old gentlemen. When Queen Victoria saw the tricycle in 1880, she ordered two.

Many models of primitive "boneshakers" have been outmoded: the kangaroo type; the grasshopper model, with curved levers like grasshopper knees instead of pedals on the rear wheel; the "sociable," with two seats side by side between two wheels, dedicated to the lady and her escort.

Note: Illustrations and anecdotes about cyclists in Asia, Europe, and America can be found in the following: "Friendly Journeys in Japan," "Mysterious Micronesia," and "Low Road, High Road, Around Dundee," *National Geographic Magazine*, April, 1936; "The Mist and Sunshine of Ulster," November, 1935; "Summering in an English Cottage," April, 1935; "Southern California at Work," November, 1934; "The Golden Isles of Guale," February, 1934; "A New Country Awaits Discovery," and "Odd Pages from the Annals of the Tulip," September, 1933; "Motor Trails in Japan," March, 1933; "Royal Copenhagen, Capital of a Farming Kingdom," February, 1932; "Across the Midi in a Canoe," August, 1927.

Bulletin No. 4, October 12, 1936.

Photograph by W. Robert Moore

A BICYCLE GOES INTO THE FREIGHT BUSINESS

In Japan the bicycle is a favorite express wagon. This one carries such a heavy load on its mat-covered trailer that a dog on a tow-line must help the "driver" propel it. "Passengers-only" bicycles are involved in a mild traffic jam in the rear.

gliders, lies near the park's center. Rapidan Camp, the rustic playground of a president, is nearby.

The Shenandoah National Park contains the highest spots in northern Virginia, Hawksbill and Stony Man peaks, both over 4,000 feet.

Note: See "Patriotic Pilgrimage to Eastern National Parks," *National Geographic Magazine*, June, 1934; and "Virginia—A Commonwealth That Has Come Back," April, 1929.

Bulletin No. 5, October 12, 1936.

Photograph by Harry Staley

WHERE GREEN MOUNTAINS LOOK BLUE

Outcroppings of granite in the Shenandoah National Park take forms of restrained grotesqueness, such as Stony Man, the Devil's Hoof Prints, and Old Rag Mountain, whose cloak of verdure is blown to rags and tatters so that the bare rock shows through. From a distance, blue haze blots out the granite gashes. Local tradition, probably acquired from original Indian inhabitants, has it that Old Rag Mountain "blooms" once every seven years, glows with golden light from its broad, wooded base to the rocky peak.